Speech: I believe in the power of technology to make lives better

I want to talk this morning about the future of healthcare.

And I want to talk about technology.

I am well known as a technology enthusiast – and not just because I have my own app.

Since I have been Health Secretary, I have put shoulder to the wheel to get out-of-date technology, which is no longer fit for purpose, like fax machines and pagers, out of the NHS – and get the best new technology in.

We may be making some progress – and I am determined to continue.

Today, I want to talk about why.

Why do I care about the best technology in healthcare?

Because I believe in the power of technology to make human lives better.

Why should anyone care about the best technology in healthcare? Because to care about technology is to care about people.

People. That's always been what all the tech, all the scientific developments and healthcare innovation is all about.

And there are some naysayers.

But Britain has always been on the cutting edge – driven by a desire to develop new ways to improve lives and save lives.

Vaccination, immunisation, IVF – pioneered by British scientists with a mission to save lives, improve lives, give the gift of life itself.

Yet all those vital technologies we take for granted now were once scary and unknown.

Take IVF – first conceived at the Royal Oldham Hospital.

It's become a routine medical practice within my lifetime, but not that long ago serious scientists were saying it couldn't be done, or shouldn't be done.

More than 8 million children have been born with the help of IVF.

Every one of us knows some of the millions of parents who have experienced the joy and miracle of parenthood that they wouldn't have otherwise known. I know some of those parents and I have seen the joy it brings.

All because of the genius of human ingenuity, and pursuit of innovation, in a

mission to make life better for people who couldn’t conceive children on their own.

All because someone cared enough to do something about it.

It’s my firm belief that robotics, personalised medicines, artificial Intelligence and genomic sequencing will all, in time, come to be considered a routine, everyday part of healthcare.

And yes, there are important ethical questions.

And yes, we must answer these.

And yes, we must take people with us.

But no, we must not stop the clock, and reject technology because it’s too controversial or too hard.

I believe we must make the case for tech in a humane, compassionate, caring way.

Listening to people’s fears, not dismissing them.

I believe in the innate and instinctive desire in all of us to care for those we love. And all this new health technology has the same simple quest to do just that: to help care for each other.

Helping to heal the nation, and we could probably all do with a little healing right now.

Because the future, the unknown, provokes strong emotions in people: excitement, curiosity, and of course fear.

Unchallenged, fear can triumph over reason, particularly when it comes to tech.

And from Malthus on, most of those apocalyptic, prophets of doom turn out be spectacularly wrong. And often not because the premise of the concern is wrong: Malthus was right to worry how we’d feed ourselves.

But wrong because they ignore the capacity of human ingenuity to shape technological development: to bend the power of science to human ends.

The naysayers, they say to me:

> Stop worrying about technology: there’s a shortage of doctors.

Or:

> This technology isn’t perfect – we shouldn’t use it.

And the thing is, the premise of these accusations is true. We do need more doctors, and the technology isn't perfect.

But the response, to both of these challenges, is to make the technology better, not to reject it altogether, in a spirit of rational enquiry and scientific progress.

The Spectator is part of a fine, enlightenment, intellectual tradition that has promoted this way of thinking for centuries.

This is what the Spectator had to say in 1871, in a scathing piece attacking Gladstone's government for dismissing vaccination rather than encouraging it:

> If vaccination were to be abandoned, the result would be that smallpox would become not an epidemic, but a pestilence, spreading infection far and wide, fatal in the majority of cases, inflicting permanent injuries on the survivors….
>
> This is the teaching of medical science, and against this we are asked to put the 'conscientious belief' of a few people that medical science is either mistaken or dishonest.

It could almost have been written today.

And I love this example from the Spectator archives, a leader column from 2 July 1948, 3 days before the NHS was born:

> There are too few doctors for the anticipated demand, there are far too few nurses, [the majority of dentists appear for the moment to be standing aloof from the scheme]….
>
> But it is undoubtedly right to get the health service started. Whenever it was started it would be imperfect, and need to be amended and improved in the light of experience…. But the nation will soon possess the best medical service in the world.

Quite right.

Progress, by its nature, is never perfect. It's piecemeal, it's hard fought, it's not the easy promises of populism. The NHS didn't happen overnight with a click of the fingers to meet every need and fulfil every expectation – as some people would have you believe.

It took years of painstaking preparations, tortuous negotiations, work to drive it forward in government, first by Conservative and then Labour ministers.

Progress means we keep going, never settling, always aiming higher, always trying to make things better.

Diagnose, test, solve, repeat.

Testing hypothesis against objective fact, with an optimistic yet sceptical mind.

We should look to the great Canadian ice skater Wayne Gretzky for inspiration on this, because the secret of Gretzy's success was not going to where the puck is, but "where the puck is going".

And it's this spirit of continuous improvement I believe we need in the NHS today.

The NHS has always been at its best when it's looked to the future and embraced new technology.

Because of the decisions this Conservative government has taken – £34 billion extra a year, the longest and largest cash settlement in its history – the NHS can plan for the future with the confidence, and technology, that it needs.

So what's 2030 going to look like?

Well, it's probably not going to be flying cars and hoverboards – though after last week, who am I to predict the future?

But I think we can be pretty certain that the digital revolution that has transformed the way we shop, eat, bank, travel, read, watch, and even find love, is going to have arrived in our hospitals and GP surgeries.

Robotic surgery that's less invasive, faster and with fewer errors.

There's the game-changing potential of AI and genomics to predict which of us are susceptible to which illnesses, diagnose those already ill faster, and develop tailor-made treatments to get us back to health.

But it's not just about this cutting-edge technology. It's about getting the basics right.

You can file for divorce online – and a depressing 13 did on Christmas Day – yet not everywhere can you book a GP online.

Even using existing technology we can do so much more:

- new software to support remote monitoring of vulnerable and elderly people in their own homes
- video consultations – so more accessible and flexible appointments
- wearables that track vital signs and gently motivate us towards healthier lifestyles

Now, some may argue that we need to hold back this tide. That we should resist and fight back.

There's even a modern-day King Canute in the form of Jeremy Corbyn, who wants

to tax robots.

And I understand the impulses behind this view. It even turns out one of my ancestors was a leading, loom-smashing Luddite.

Yet, history has shown us time and again, it’s better to shape change than to fight it.

It’s better to be in favour of the future than live in fear of it.

And when I am out in hospitals and talking to NHS teams across the country, I also know that people – patients and staff – are enthusiastic to embrace technology.

They increasingly expect it to be there.

Technology is across all other parts of their lives.

They want to know why their mother can’t get the best cancer treatment.

They want to know why their child has to wait longer to be diagnosed.

Why does their GP need to wait for a letter in the post from their specialist when every other part of their life is managed online?

So this is how we’re going to do it: there’s 3 parts to this approach:

First: prediction prevention.

We’re going to use technology to help us identify those of us who are at higher risk of developing a disease, and then use existing medicine and advice to help prevent us from becoming ill in the first place.

Second: driving innovation across the NHS.

So we’re introducing NHSX, a brand new, specialist bridge between the worlds of healthcare and technology.

It’s going to work with industry and in-house teams to create a culture of innovation and experimentation within the NHS so proven, safe, tested existing technology spreads faster across the system – and we break up some of the silos that slow down progress.

We’ll ensure we keep our first-ranked place at the forefront of the global debate around genomics so we can create an ethical framework to ensure this exciting new tech is developed responsibly.

Later this week, we will celebrate the brilliant 100,000 Genomes Project, which has harnessed whole genome sequencing to discover new diagnoses and better treatments for patients with rare diseases and cancer.

We’re world-leaders, but we’re not resting on our laurels.

We’re going further with an ambitious target of sequencing one million whole

genomes.

It’s not just about these 2 areas. Across the board the NHS needs a culture of seeking out and sucking in the best innovations on the planet.

We’ve got to stay at the cutting edge.

Third, and this is the most important for me: people.

The reason I care about tech is because I care about people.

We should never lose sight of that when we’re talking about the latest gadgets and scientific breakthroughs.

The only reason tech and innovation matters is because people matter.

Getting it right in the NHS means your child, your partner, your parents, have a better chance of survival.

But there is another important – and often missed – benefit to good technology.

The best technology can also help doctors, the nurses, the paramedics and healthcare staff, who make the NHS what it is.

The right tech makes their lives easier. In the words of Eric Topol: it gives back the gift of time.

Because no robot is ever going to replicate human empathy.

No machine can replace what makes us human – the caring.

So the great big team that is the NHS – everyone in every part of the NHS – will need to be a part of this new era in NHS technology, and that involves training.

Because by embracing and shaping technology, we can harness progress to help people.

And I want to end on this point of progress.

Barack Obama said:

> If you had to choose a moment in history to be born, and you did not know who you would be – whether you were going to be born into a wealthy family or a poor family, what country you’d be born in, whether you were going to be a man or a woman – if you have to choose blindly what moment you’d want to be born, you’d choose now.

Right now is the best time ever to be alive.

Just down the road from here was the Central London Recruiting Depot during

the First World War.

Like many of us, my great-grandfather served in that war.

He had served in the Boer War and in 1914 signed up, and spent the first 3 years training troops here in Blighty.

When we got short on men, he was sent out to France in March 1917, and in October he was injured when a shell exploded next to him and he was sent back to recuperate.

But we're made of determined stuff in my family.

In 4 months he was patched up, sent out again, and back into the trenches.

A few weeks later, he was shot through the shoulder.

He survived, but this time they thought they better give him an honourable discharge.

He cheated death twice in a year of front-line service.

The average life expectancy in the trenches was just 6 weeks, boys as young as 16 served on the frontline.

A century ago, if you managed to come through the war unscathed, you could expect to live to 50 if you were a man, or 55 if you were a woman.

An infection was the most common cause of death.

Tens of thousands of children didn't live to see their first birthday.

Now, thanks to antibiotics, immunisation, better public health and hygiene, a child born in the UK today has a good chance of living to 100.

And we led this change.

Nightingale, Fleming, Crick and the rest.

We must cherish and learn from this proud history, without ever being complacent or captured by the past.

And this is what I believe:

We led this change because of scientific progress.

We did it because technology was harnessed for human good.

We did it because we looked forward.

So, let's look forward now with confidence and optimism – as we have done before.

Let's embrace the innovations.

Let’s believe in Britain.

And let’s shape a better future for all.